

IN THE CLAIMS

Please amend claim 9 and cancel claim 10 as indicated in the complete listing of all claims in the application set forth below.

1. (Previously Presented) A method of processing organic waste in divided solid and/or liquid form in a single reactor containing a bath of molten glass surmounted by a gas phase, comprising incinerating said waste in presence of oxygen or oxygen-containing gas acting as an oxidizer at a surface of said bath, and vitrifying said incinerated waste in said bath, the method being characterized in that:

in addition to the oxygen or the oxygen-containing gas delivered as the oxidizer into said gas phase, oxygen or oxygen-containing gas is also injected into said bath by injection means having an open end, said injection means being cooled and arranged in such a manner that on ceasing injection, said injection means do not form a plug of glass at their open end.

2. (Previously Presented) The method according to claim 1, characterized in that said oxygen or oxygen-containing gas injected into said bath of molten glass is introduced into said reactor beneath the surface of said bath.

3. (Previously Presented) The method according to claim 1, further comprising cooling walls of said reactor and/or feeding

means other than said injection means, which feed said reactor with said waste and with said oxidizer.

4. (Previously Presented) The method according to claim 3, further comprising dual cooling of the feeding means which feed said waste to said reactor wherein:

a first cooling of a thickness and of an outside surface of said feeding means is designed to protect said feeding means from corrosion; and

a second cooling of an inside surface of said feeding means is designed to minimize heat transfer to incoming waste.

5. (Previously Presented) The method according to claim 3, characterized in that said walls of said reactor in contact with said gas phase and/or said feeding means introduced into said reactor in contact with said gas phase are cooled by circulation of at least one cooling fluid maintained at a temperature higher than a dew point temperature of said gas phase.

6. (Previously Presented) The method according to claim 1, characterized in that said bath of molten glass is heated by induction, by flame, by plasma torch, or by means of electrodes dipped therein.

7. (Previously Presented) The method according to claim 1,

characterized in that said method is implemented in a cold crucible heated by induction.

8. (Previously Presented) The method according to claim 1, characterized in that said waste is radioactive waste.

9. (Currently Amended) An apparatus for processing organic waste in divided solid and/or liquid form by incineration and vitrification, the apparatus comprising a reactor associated with heater means suitable for maintaining a bath of molten glass in a bottom portion of said reactor, and fitted with:

- means for emptying said bath of molten glass;
- a feeding device for feeding said waste to be incinerated and vitrified, said feeding device having an open end opening above a surface of said bath of molten glass;
- means for feeding oxygen or oxygen-containing gas, delivering said oxygen or said oxygen-containing gas above the surface of said bath of molten glass; and
- at least one combustion gas outlet provided in a top portion of said reactor well above the surface of said bath of molten glass;

the apparatus being characterized in that said reactor is further equipped with injection means having an open end for injecting oxygen or oxygen-containing gas into said bath of molten glass; said injection means:

are introduced into the bottom portion of said reactor beneath the surface of said bath of molten glass so that said injection means do not pass through said gas above the surface of said bath of molten glass and being arranged in such a manner that on ceasing to be fed, said injection means do not form a plug of glass at their open end; and

having a structure which includes at least one circuit for circulating a cooling ~~fluid~~ liquid therein.

10. (Canceled)

11. (Previously Presented) The apparatus according to claim 9, characterized in that said injection means are disposed vertically, pass through the bottom portion of said reactor and present an outlet at 90° to a vertical axis.

12. (Previously Presented) The apparatus according to claim 9, characterized in that said feeding device for feeding said waste and said means for feeding oxygen or oxygen-containing gas have a structure which includes at least one circuit for circulating a cooling fluid therein.

13. (Previously Presented) The apparatus according to claim 12, characterized in that the structure of said feeding device for feeding said waste is tubular and is defined by an outside surface

and an inside surface, said structure including in a thickness thereof at least two circuits for circulating cooling fluids, at least one of said two circuits being adapted to cool said structure and said outside surface of said feeding device, and at least another one of said two circuits being adapted to cool said inside surface of said feeding device.

14. (Previously Presented) The apparatus according to claim 9, characterized in that said reactor has double-walled type walls, to allow a cooling fluid to circulate.

15. (Previously Presented) The apparatus according to claim 9, characterized in that said reactor is a cold crucible, and said heater means are means for induction heating.

16. (Previously Presented) The method according to claim 1, wherein said oxygen or oxygen-containing gas is injected into said bath of molten glass in sufficient quantity to substantially reduce metal forming within said bath of molten glass.

17. (Previously Presented) The method according to claim 1, wherein said oxygen or oxygen-containing gas is injected into said bath of molten glass in sufficient quantity to impart moderate stirring to said bath of molten glass.